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HOYT A. FLEMING III P.O. BOX 140678 BOISE, ID 83714			EXAMINER GISHNOCK, NIKOLAI A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/613,564

Applicant(s)

BERMAN, DENNIS R.

Examiner

Nikolai A. Gishnock

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 11/11/2008.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

In response to Applicant's reply filed 11/19/2008, claims 1-52 are cancelled. Claims 53-73 are pending.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 11/11/2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 53-73 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which Applicants regard as their invention. Evidence that claims 53 & 65 fail to correspond in scope with that which Applicant regard as the invention can be found in Applicant's Remarks of 11/19/2008 at page 11; Applicant's Specification at page 7, paragraph [0020]; and Examiner's Interview Summary of 11/18/2008. Applicant has stated that the claimed invention displays at most one incorrect character, such that the display is determined by inputting a first character, then analyzing the character, then inputting a second character, then further analyzing, then overtyping or continuing. This statement indicates that the invention is different from what is defined in the claims because no analysis is recited between receiving the first and second characters. The claim is thus interpreted as doing nothing until at least two characters are received. This is in juxtaposition with the described invention, which must

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determine whether the first character is correct before allowing it to be overwritten with the second received character in the second font.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 53-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziv-El (US 6,302,698 B1), hereinafter known as Ziv-El, in view of Boon (US 6,022,221 A), hereinafter known as Boon.

7. Ziv-El teaches a method for training a learner to memorize the answer to a question (The present invention provides for a teaching strategy where the students are given a question in a frame, which requires them to respond both in the form of an answer which is automatically scored by the system, as well as with an explanation which can be subjectively evaluated by the teacher, 4:10-15), the answer to the question including a keyword having at least 2 characters (alternative answers 18:49-65; the answers "uneasy", "fidgety", or "reckless" are understood to have at least two characters), the method performed by a computer system having a processor,

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a memory, a keyboard, and a display (an on-line teaching and learning system according to the invention, including a teacher's computer and five student computers. The teacher's computer includes an input device (such as a keyboard, a mouse or similar means for selecting a character or an item on a screen as well as bar code reader apparatus, by which characters can be read and input to simulate keystrokes on a keyboard) and an output device, in this example, a 17-inch color monitor. In this description, the term "computer" shall mean an item of equipment including a central processor, a memory, at least one input device and at least one output device, 5:41-52), the method comprising: presenting on the display, utilizing a graphical user interface, the question and the answer to the question (The teacher's class response window applies to frame of a single lesson, as indicated by (1 lesson) on Response button. The name of the lesson is English 5 as shown. The Question/Summary and the Answer(s) remind the teacher of what the authored frame is all about, while the teacher examines the dynamic screen below, as the students are responding, 22:42-49; Response Screen, (also referred to as the responses view), which is the result of pressing the Response button after the students have already started to respond. The screen is dynamic since it is updated while students type on their keyboards. The two top rows of buttons, as well as the Question/Summary field, are virtually the same as the Frame Content User Interface, 22:20-41; see also 18:49-65, the question "Give synonym of 'Restive'. Explain meaning or use 'restive' in a sentence." is written in the Student Display area, while the message "You have 30 minutes for this quiz. NO TALKING PLEASE" is written in the Class Display area. The Answers to the question, if there are more than one, are entered by typing into data entry/display area and adding it to the list of Answers by actuating the Add button; see also Figure 8); presenting on the display, utilizing the graphical user interface, a prompt to answer the question; then, receiving a first received character entered into the keyboard by the learner; then, receiving a second received character

entered into the keyboard by the learner (FIG. 11 is a view of a student's screen for a Fill-in-the-blanks type of exercise. The cursor initially comes to rest in the first blank space to be filled in, as shown by the ">" symbol. When the student finishes fitting in the first answer in the space for Atlantic, he or she presses the tab key or clicks with the mouse on the space for Pacific and fills in the second response, etc. Each student response is compared and evaluated, character-by-character at the time of typing, with the corresponding answer according to the Judge mode, and reinforcement is given according to the Feedback selection while using the comparison and evaluation logic, 20:65-21:21; see also response area, Figure 11); if and only if the first received character is equal to the first character of the keyword and if and only if the second received character is equal to the second character of the keyword, presenting on the display, using the graphical user interface, the first received character in a first font and presenting on the display the second received character in the first font; if and only if the first received character is equal to the first character of the keyword and if and only if the second received character is not equal to the second character of the keyword, presenting on the display, using the graphical user interface, the first received character in the first font and presenting the second received character in a second font (The column headed "Response" is the response of the student to the teacher's request for the direct answer to the question shown in brief. This Response column is color-coded, but for convenience is shown here as follows: italics font instead of green for correct; normal font instead of red for incorrect. If a response is the result of a question whose answer is judged according to the Keyword Mode, and a student's response has not yet reached the keyword, the response would appear in bold or blue. Also, if a question does not have a programmed correct answer, the Response column would be written in bold or blue, 22:50-23:8; it is understood that the character-by-character response comparison at the time of typing presents the characters in italics if correct and in normal font if incorrect, thus second

received character would be displayed in the first font only if it is correct, and in the second font only if incorrect) [Claims 53 & 65].

8. Ziv-El teaches where responses are color coded and font-coded (22:50-23:8); where reinforcement is given in response to a correct or incorrect answer (Mode control data is stored in areas associated with each frame to determine modes of operation within the frame. The Judge Mode group is a class of modes that determines how student responses are to be judged and evaluated. The Judge Modes includes Identical Mode which requires a case insensitive, perfect match between the characters of a student response and those of an answer, Case Sensitive Mode, which requires that any matching must be case sensitive, Match+ Mode, which requires matching only of the first part of a response, Keyword Mode which requires the presence of a particular string within a longer string of characters, and None Mode, which requires no matching to take place. This is followed by mode control data designating various Learning Reinforcement Modes. These modes include Letter-by-letter with mode control data stored in memory area, implying a reinforcement feedback signal on every correct character typed by the student, with a different signal on the last character of a correct response. A Final-letter Reinforcement mode (with mode control data stored in memory area) implies a particular reinforcement feedback signal on the last character of a correct response only, 12:15-39); where reinforcement may be in the form of audio, light, color, or font (Each student computer includes a full alphanumeric keyboard, and a screen and is provided with a speaker or beeper capable of emitting sounds to act as an audio feedback signal for learning reinforcement of the correctness of a response or to alert the student to respond to a teacher's request. A learning reinforcement feedback signal can be either an audio signal from the speaker, or a visual reinforcement feedback signal, or both. The visual reinforcements signal is provided by a light or a place on the screen, which goes on or flashes in different modes and also acts as a learning

reinforcement feedback signal. Also, instead of flashing lights one can use say inverse video characters (i.e. white on black) on the student's screen for correct and normal (black on white) for incorrect, with a flashing cursor when completing a correct response, 6:6-34); and where a student modifies a previously typed answer (The question which was authored into work area appears near the top. The cursor comes to rest in Answer work area. The student is expected to write his or her response to the question there, and the explanation in work area below under Explanation. When the student writes his or her response, which is shown as 'fidgety', the response is compared and evaluated, character-by-character at the instant each character is written, according to the Judge criterion, against the three authored answers in block. At the same time, characters are transmitted as they are being typed to the Response Buffer by means of the Response server. Should the student now click outside the Explanation text entry/display area, the change in X-Y co-ordinates is noted, the cursor is transferred back to the text entry/display area, and the student may proceed to modify the response in text entry/display area, while comparison and evaluation of the response resumes as before, 19:36-62). What Ziv-EI fails to explicitly teach is replacing the first received character with the second received character if and only if the first received character is not equal to the first keyword [Claims 53 & 65]. However, replacing incorrect characters with correct characters in a response is understood to be performed by a student modifying the response in the text entry field in reply to the dynamic evaluation. Ziv-EI would merely modify detected incorrect characters by replacing them with the most recently typed character when a student is not allowed to proceed typing the response until the next consecutive correct character is input. In order to provide more immediate reinforcement to the student when an incorrect character is typed than when the entire response is evaluated. To wit, Ziv-EI teaches where the student would modify an incorrect character before typing the remaining response. Therefore, it would have been obvious to one

of ordinary skill in the art, at the time the invention was made, to allow the replacement of the first received character with the second received character only if the first received character is not equal to the first keyword {incorrect} in the method of Ziv-El, in order to provide color-coded or font-coded feedback to a student as soon as a character is typed, rather than after the entire response has been typed and evaluated [Claims 53 & 65].

9. What Ziv-El further fails to teach is where the question, answer, the prompt to answer the question, and the received characters are simultaneously presented on the display [Claims 53 & 65]. However, Boon teaches this at 12:32-13:5 and at Figures 15-18. all the elements of the question, answer, prompt, and received response with correct and incorrect markers of Ziv-El would merely be displayed on the screen all at once, as taught by Boon, in order for a user being able to identify exactly what was incorrect about an answer by immediately showing incorrect answers using a marker indicating where the answer was incorrect. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to simultaneously present the question, answer, the prompt to answer the question, and the received characters of Ziv-El, as taught by Boon, in order to enable a user to clearly and immediately see the error [Claims 53 & 65].

10. Ziv-El teaches wherein the displaying of the first received character in the first font and displaying the second received character in the first font includes displaying a portion of the answer to the question that includes the correct substance of the answer as well as the correct spelling of the answer (Note that the students in seats A2, A6, B1, C2, and C6 have been marked wrong, and the responses are not in italics, but not all for the same reason. The students in seats A2, B1, and C6, are totally wrong. The student in seat A6, has got the right word, but has misspelled fidgety. The student in Seat C2 has not yet completed his response, as is the case of the student in B3, however whereas the B3 student is on the right track of

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"fidgety", and hence her response is in italics, the student in seat C2 typed a "g" instead of a "d", thereby causing his response to change immediately from italics to the normal font, 23:23-37) [Claims 54 & 66].

11. Ziv-El teaches wherein the displaying of the first received character in the first font and the displaying of the second received character in the first font includes displaying a portion of the answer to the question that includes a substantive word and a non- substantive word [Claims 55 & 67], two substantive words and a non- substantive word [Claims 57 & 69], three substantive words and a non- substantive word [Claims 58 & 70], and wherein the non- substantive word is the word "and" [Claims 56 & 68] (When a question or statement is presented which has missing words which have to be filled in, in a specific order, the Ordered command is selected by the author, as shown in box 150. The Frame is authored by writing the question or statement, complete with the missing words filled in, as shown in the Student Display area 132. The words to be filled in here are "Atlantic, Pacific and African." 20:35-64; It appears that "Atlantic" is a first substantive word, "Pacific" is a second substantive word, "African" is a third substantive word, and "And" is the non- substantive word) [Claims 55-58 & 67-70].

12. Ziv-El teaches wherein the first font has a color that is different from the color of the second font [Claims 59 & 71], wherein the second font is a red font [Claims 60 & 72], wherein the first font indicates that a character displayed in the first font is a correctly entered character [Claim 61], wherein the second font indicates that a character displayed in the second font is an incorrectly entered character [Claim 62], and wherein at least a portion of the answer is displayed in a blue font [Claim 64] (When students respond on their keyboards, their responses are sent character by character in real time to the responses buffer on response server, so that the teacher can observe, virtually character by character, on the monitor, a teacher's class

response window showing a large number of students responding simultaneously. The responses appear color-coded, such as green if the student is on the correct track, red for wrong and blue if a response is the result of a question which does not have a programmed correct answer or the keyword has not yet been typed in a Keyword exercise. Such 'color-coded' responses, which are distinguished one from the other according to effect of the comparison and evaluation logic described, include the idea of a change of fonts like italic and bold, 11:19-35; also, this Response column is color-coded, but for convenience is shown here as follows: italics font instead of green for correct; normal font instead of red for incorrect. If a response is the result of a question whose answer is judged according to the Keyword Mode, and a student's response has not yet reached the keyword, the response would appear in bold or blue. Also, if a question does not have a programmed correct answer, the Response column would be written in bold or blue, 22:50-23:8; it is understood that, in the response, italics font corresponds to green color which represents a correct keyword answer, normal font corresponds to red color representing an incorrect keyword answer, and bold font corresponds to blue color which represents that a keyword has not been found in the response) [Claims 59-62, 64, 71, & 72].

13. Ziv-El teaches wherein the displaying of the first received character in the first font and the displaying of the second received character in the first font occur simultaneously with the displaying of the question and the answer to the question (The teacher's class response window applies to frame of a single lesson, as indicated by (1 lesson) on Response button. The name of the lesson is English 5. The Question/Summary and the Answer(s) remind the teacher of what the authored frame is all about, while the teacher examines the dynamic screen below, as the students are responding, 22:42-49; see also Figure 14; the question/summary, correct answers, and responses are displayed simultaneously) [Claims 63 & 73].

Response to Arguments

14. Applicant's arguments with respect to claims 53-73, see pages 9-13, have been considered but are not persuasive.

15. In response to applicant's argument that limitations of Ziv-EI's teacher's display cannot be read into Ziv-EI's student's display, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In the instant case, Examiner's position is that it would be apparent to one of ordinary skill in the art, upon reading the disclosure of Ziv-EI, to incorporate both the features of the teacher's display and the student's display to a single display, in order to allow a student to be self-taught using a computer program; thus, Examiner's citations are proper.

16. Examiner's position is further that a backspace is not a character; thus, the proffered example where the method of Ziv-EI receives a first character, displayed in a first font, is overwritten when a student uses a computer's backspace key to overwrite said first character and input a corrected second character in the second font is relevant to the claims analysis. Applicant's discussion of a backspace character being printed in a second font is unconvincing since a backspace is not printed; thus it does not constitute "receiving a second character" as claimed, as Applicant's specification defines the received characters as "alphabets, numerals, or symbols"; of which a backspace is excluded. As such, the argument is further unconvincing.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. L'Allier (US 6,039,575 A) discloses fill-in words. Flanders (US 4,690,644 A) discloses partial answers.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolai A. Gishnock whose telephone number is (571)272-1420. The examiner can normally be reached on M-F 8:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan M. Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/2/2009

/N. A. G./

Examiner, Art Unit 3715

/XUAN M. THAI/

Supervisory Patent Examiner, Art Unit 3715